

Atomic Theory and Structure REVIEW GUIDE

	Model of the atom (DRAW IT)	Experiment	What was the big discovery / how did they refine the model of the atom
1. Democritus			
2. John Dalton			
3. JJ Thomson			
4. Ernest Rutherford			
5. Niels Bohr			

Physical Science**Name** _____

DSHS

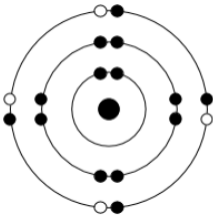
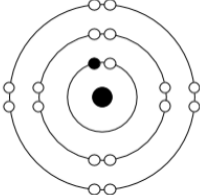
Period _____

Subatomic Particle	Charge	Mass	Location
6. Proton			
7. Neutron			
8. Electron			

USING YOUR PERIODIC TABLE FILL IN THE TABLE BELOW

	Element Name	Element Symbol	Isotope Notation/ Atomic Shorthand	Atomic Number	Atomic Mass	Number of Protons	Number of Neutrons	Number of Electrons
9.	Chlorine							
10.						3		
11.			N^{14}_7					

Fill in the table using your periodic table:

	12.	13.	14.
Element Name			Sodium
Bohr Model			
Lewis Dot Diagram			
Electron Configuration			

15. Label the Atomic Mass, The Atomic Number, & Element Symbol

21	2
	8
Sc	9
	2
Scandium	
44.955908	

80
Br
35

16. The atomic mass is equal to the number of _____ + _____
in an atom. (Choices protons, neutrons, electrons)

17. The atomic number is equal to the number of _____ and / or
_____ in a neutral atom. (Choices protons, neutrons, electrons)

18. Isotopes are : _____

19. **True or false:** Two different types of atoms for example Fluorine and Chlorine can be isotopes of one another. **Explain**

20. Circle the isotopes:

Chlorine – 35

Chlorine - 34

Sulfur – 35

Oxygen - 17

Chlorine – 36

Argon – 36

21. Atoms that have the same number of protons but a different number of electrons are called **ions**.

a) If an atom has a larger number of electrons than protons, it will have a _____ charge.

b) If an atom has a smaller number of electrons than protons, it will have a _____ charge.

c) The number of _____ never changes

d) _____ tend to lose electrons

e) _____ tend to gain electrons

Physical Science

Name _____

DSHS

Period _____

Calculate the charge on the following:

	Element Name	Atomic Number	Atomic Mass	Number of Protons	Number of Neutrons	Number of Electrons	Charge
22.	Bromine	35	80			36	
23.	Aluminum	13	27			10	
24	Carbon	6	12			16	

25. Opposite charges _____. **Give an example of two charges that are opposite:**

26. Like charges _____. **Give an example of two charges that are alike:**

27. There are two naturally occurring isotopes of Sulfur-32 and Sulfur-34, and the average atomic mass of sulfur is 32.06, which isotope is more abundant or is more frequently found?

28. Phosphorus has many naturally occurring isotopes, but the most frequently found isotopes are Phosphorus-31 (abundance 95%), Phosphorus-32 (abundance 3%) and Phosphorus-33 (abundance 2%). **What should you roughly expect the average atomic mass of Phosphorus to be? Why?**

29. The electrons in the outer shell are called: _____

30. What is the easiest way to tell how many electrons will be in an atoms outer shell???